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AUTHOR French, Lucia
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ABSTRACT

The ways in which preschoolers use the word "but" were studied. It was found that the eight preschoolers, who ranged in age from 3;9 to 5;5, were able to use "but" to express a number of different types of adversative relationships. "But" introduced clauses containing information that: (1) contrasted with shared knowledge about the usual state of affairs, (2) described a condition under which the situation described in the preceding clauses did not hold, (3) denied an inference that might be drawn on the basis of the preceding statement, (4) explicitly contradicted a prior statement, and (5) introduced a temporal repair. The cognitive prerequisites that could be assumed to underlie and motivate each of these types of "but" statements also are considered. Statements contained in categories one and two indicate knowledge of optional pathways in the occurrence of an event, while statements contained in category three indicate at least an emerging ability to recognize the implications of one's own statements, and possibly to take the listener's perspective and make inferences about her inferences. Statements in categories four and five indicate knowledge of and adjustment to discourse conventions. The subjects' productions are divided into categories and discussed on the basis of whether the contrast signaled by "but" was directed toward the text of the statement, or toward the discourse process per se. It is suggested that the analyses indicate a somewhat surprising level of sophistication in children's understanding of discourse conventions and their ability to adjust their speech in accord with such conventions. (SW)

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But of course preschoolers understand the meaning of but!

Lucia French

Hampshire College

U.S. DEPARTMENT OF EDUCATION
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But of course preschoolers understand the meaning of but!

The acquisition of relational terms such as before, after, because, so, if, and or has been the focus of a great deal of research by psycholinguists and developmental psychologists. The acquisition of temporal and causal terms is obviously relevant to the development of temporal and causal understanding. If and or have both natural language and formal logic meanings, and the acquisition of these terms has been of interest both to those who define "mature" reasoning in terms of conformity to the conventions of formal logic and to those who are interested in the similarities and differences between formal logic and natural language. But is also a relational term, but it has captured the interest of almost no one, probably because it is not clear what issues are addressed by considering how preschoolers use this term. I will argue that an analysis of how they use but can tell us a great deal both about how preschoolers organize their knowledge base and about their understanding of discourse conventions.

Before describing what children's use of but reveals of their underlying knowledge, it is necessary to define the term. This is somewhat difficult because but has a function rather than a discrete definition, and its meaning may therefore appear to vary depending on the context in which it appears. Since it has the same truth-table definition as and, and can often be used interchangeably with and, the meanings of these two terms can be assumed to overlap at least somewhat. However, there are both syntactic and semantic constraints that prohibit replacing all instances of and with but. Specifically, but has an adversative function; it signals that what is to follow is unexpected

on the basis of either prior presuppositions or an inference that might be drawn from a prior statement. To make this definition more concrete, consider the sentences shown in Table 1.

Table 1

Examples of but-sentences

1. The pen is new, but it writes poorly.
*2. The pen is new, but it writes well.
*3. The pen is red, but it writes well.

New pens ordinarily write well, and but appropriately introduces information that denies rather than confirms this presupposition. Thus, "The pen is new but it writes poorly" is appropriate, and "The pen is new but it writes well" is inappropriate. "The pen is red, but it writes well" is also inappropriate since the two propositions have no relationship to one another. This sentence could however be considered appropriate if, for example, someone had requested a blue pen.

These sentences were taken from Kail (1980), one of very few studies addressing the acquisition of but. Kail asked children of four ages ($\bar{X}$ ages 6;8, 7;11, 8;6, and 9;5) to judge the acceptability of such sentences. Her findings are outlined in Table 2. The first graders judged the anomalous Type 2 sentences to be correct over 90% of the time, the anomalous Type 3 sentences to be correct about 60% of the time, and the correct Type 1 sentences to be correct only 20% of the time. Second graders rated the Type 3 sentences, in which the two propositions were unrelated, as correct 35% of the time, and the other two sentence types as correct about 60% of the time. Subjects in the two older groups gave the highest acceptability ratings to the correct sentences, and the lowest to the sentences containing unrelated propositions, but did not consistently reject the two inappropriate sentence types. This patterning of the data led Kail to conclude that but is first believed to be

synonymous with and, and that it is then misinterpreted as functioning to support rather than to deny a prior implication.

I have been working with a set of data obtained by asking 43 children, 2;11 to 5;6, to describe familiar events, such as going to the grocery, having a fire drill, getting dressed, etc. The 43 children were questioned about each of six activities on three occasions, producing over 700 protocols. The term but appeared in these protocols a total of 80 times, and was used by 25 subjects spanning the entire age range.

In considering these productions, I was interested in determining the extent to which these spontaneous productions supported Kail's developmental claims, and in determining the types of cognitive competencies that could be inferred from the various productions of but. Since all of my subjects were younger than any of Kail's, it would be expected that, if her model of acquisition were correct, my subjects would have tended to use but as if it were synonymous with and. There were in fact no cases in which but was used where and would have been more appropriate, and no cases in which but introduced a statement that confirmed rather than denied a prior implication. Of the 80 but-statements produced by our subjects, only 15 were uninterpretable or anomalous, and none of these uninterpretable productions were ones that would have been predicted on the basis of Kail's model.

There is obviously a serious discrepancy between the levels of competency shown by our subjects and Kail's. While production and comprehension do not always develop in tandem, it seems extremely unlikely that children would be able to produce appropriately formed but-statements by three or four years of age, but unable to comprehend them until age eight or later. Basically, I would suggest that the developmental pattern Kail tapped was not one of age-related changes in the understanding of but, but rather one of age-related

changes in understanding the conventions of the acceptability judgment paradigm. While such methodological considerations are crucial and deserve much more attention, I want to spend the remaining time discussing the different types of adversative relationships that were expressed by our subjects and the inferences about underlying cognitive representations and knowledge that can be drawn from these productions.

It was possible to divide the 65 interpretable but-statements into five categories depending on the type of adversative relationships that were expressed. These categories, and some examples of each, are shown in Table 3.

The first category consists of those cases in which but was used to signal the denial of implicitly shared knowledge. Eight subjects, ranging in age from 3;9 to 5;4, were responsible for the ten utterances in which but conjoined two propositions that were not contrastive at the level of the actual discourse. Examples are shown in Table 3.

> You walk fast, but you can't put your coats on cause you need to hurry. (S#19, 4;2).

The context for this statement is a description of what happens during a fire drill. People commonly go outside during a fire drill. Ordinarily people put on their coats before going outside, but not during a fire drill. At one level, such references to implicit knowledge might be considered to exemplify "egocentric speech," that is, failure to take account of the listener's perspective. However, as analyses of adult speech indicates, assumptions of shared knowledge are not only common but necessary among mature language users. Thus these children's references to implicit knowledge might be interpreted as indicating a realistic understanding of discourse constraints as readily as they might be interpreted as reflecting egocentrism.

What is particularly striking in all these cases of implicit contrast is that the element introduced by but contrasts with the "normal" state of affairs. The normal state remains implicit, and it is the departure from the normal that is signalled by but and made explicit. These utterances are therefore interesting both because they reflect children's assumptions of what knowledge is likely to be shared, and because they indicate the speakers' awareness of alternative pathways in behavior and the relative likelihood of these different pathways actually occurring. For example, it is optional whether or not to wear a coat outside in cold weather, but the choice of not wearing it is exercised only in exceptional circumstances.

In the examples just discussed, alternative instantiations were noted in an extremely subtle manner. The data also included a number of instances in which the existence of alternative pathways was made more explicit. These were cases in which but was used in conjunction with the terms when, if, and sometimes. There were fifteen such utterances, produced by seven children ranging from 4;3 to 5;6. Some examples are shown in section 2 of Table 3.

> I never cooked them, but I'll try cooking them if my mommy buys it. (S#20, 4;3).
>
> Well, I first put on my underpants, then my socks, but if I'm wearing sandals, I don't put on my socks. (S#43, 5;6).

What is particularly noteworthy about these utterances is that the term but is used to introduce information that contrasts with other explicitly stated information, and that this contrast is further qualified; in the case of qualifications formed with when or if, the condition under which the contrasting situation occurs is made explicit; when sometimes is used, the nature of the alternative condition is left unspecified.

Since there is virtually no prior research concerning the development of knowledge about alternative pathways within events, there is no preexisting interpretative framework into which these data can be incorporated. Nevertheless, these data are extremely provocative in terms of the evidence they provide of the sophistication of preschoolers' knowledge about events and the conditions under which events may be restructured, as well as of their ability to use language in order to describe this complex event knowledge.

The third category of but-statements consists of cases in which but signals the denial of an inference that might possibly be drawn on the basis of the preceding statement. There were 28 such occurrences, produced by 13 subjects ranging from 2;11 to 5;4. Again, examples are shown in Table 3. One example is this statement by a child of 4;0.

> I putted on my green pants and one of my socks is blue and one of my socks is brown, but I couldn't find the other one. (S#15, 4;0).

In this example, "But I couldn't find the other one" counters a possible inference that the speaker is wearing mismatched socks by choice. Taking into account that a listener might draw a faulty inference on the basis of previously presented information seems to be a much more sophisticated form of perspective taking than either assuming shared knowledge or noting an explicit contrast between two alternative pathways that are being mentioned. It isn't necessarily the case that these subjects should really be credited with the ability to take account of erroneous inferences that might be drawn from an utterance they have made, and furthermore, with the ability to counter this faulty inference. While this may be an accurate account of what they are doing, more parsimonious accounts are possible. The child may be dealing only with implications that he recognizes himself, rather than with ones that he infers

the listener might be noticing, or the denial might be based on underlying knowledge without an intervening step of recognizing that the contrast is directed toward an implication rather than toward something that was actually stated.

A choice among these different accounts is not possible on the basis of these data. What is clear however is that, whether or not they did so consciously, these preschoolers displayed an awareness of the implications--as opposed to the explicit content--of their statements. To my knowledge, this is the first evidence to suggest that preschoolers may be sensitive to the implications of their own utterances. If it could be assessed with more certainty, the emergence of such sensitivity would be an important milestone at the intersection of several areas of interest to developmental psychologists, including the development of logical competence, of discourse skills, and of perspective-taking abilities.

In six cases, but signalled an explicit contradiction, or self-correction. These statements were made by five subjects ranging from 3;10 to 5;4, and several are shown in section 4 of Table 3. In five of the six cases, the speaker denied knowing anything else about the topic of discourse, then introduced more information, as in the following reply to the question of whether the child can provide more information about birthday parties:

> Uh-uh. But you can bring lots of, you can eat and have lots of candy. (S#38, 5;4).

The use of but to conjoin the denial that anything else is known with the provision of additional information indicates an awareness that the additional information violates the expectation set up by the initial denial. Here, in contrast to the previous categories, the use of but seems to be

directed toward discourse constraints--don't say you are finished until you are--rather than toward the actual discourse content.

The final category of appropriate productions also consists of cases in which the but-statements are directed toward discourse constraints. There is a general rule of discourse to the effect that when describing activities that have a sequential order, the order of mention should ordinarily be congruent with the order of occurrence (e.g., "I eat and go home" has a different meaning than "I go home and eat"). In reporting a series of events, a speaker may of course "err" and omit an event from its correct position in a sequence. It is not appropriate for him to simply mention the event at the time the omission is noticed; he must somehow indicate where this event fits into the temporal structure of his description. An example of such a temporal repair is the following statement by a child of 4;7:

> Make the dough. And then you put it in the oven. But before you put it in the oven, you make the cookie shapes, and then you put it in the oven. (S#24, 4;7).

The protocols contained six such temporal repairs that were introduced by but. These were produced by four subjects from 2;11 to 5;4. As in the case of explicit contradictions, it seems that the use of but to introduce temporal repairs is a signal that the upcoming information might be unexpected because it violates a rule of discourse.

The final category of but-statements consists of the uninterpretable utterances, some examples of which are shown in the last section of Table 3. There were fifteen of these, produced by ten subjects ranging in age from 3;5 to 5;5. Only three of these ten subjects produced only uninterpretable but-statements. In light of Kail's research, it is important to note that

these uninterpretable occurrences were neither cases in which but was used as if it meant and nor cases in which it introduced a statement that confirmed rather than denied an implication of a prior proposition. In all cases, it seemed that but was being used to express an adversative relationship. What made the utterances uninterpretable was the absence of information that would clarify what the statement introduced by but was being set in opposition to.[1] Such utterances might accurately be described as "egocentric."

Before discussing these data further, it is necessary to say a few things about the classification system just described. It was derived on the basis of a relatively small sample of data; it does not exhaustively describe the types of adversative relationships that can be expressed with but (for example, it does not include but used to express the contrast signalled by the German term sondern, a specialized meaning discussed by Kail & Weissenborn, 1980), and is probably not the only classification system that could describe these data. Rather than being intended as a theoretical statement about the types of relationships that can be expressed by but, this classification system is meant to be a functional means of categorizing the utterances in order to capture the types of contrasts to which preschoolers are sensitive.

These qualifications aside, what conclusions can be derived from the ways in which the preschoolers used the word but? They were able to use but to express a number of different types of adversative relationships. But introduced clauses containing information that (1) contrasted with shared knowledge about the usual state of affairs; (2) described a condition under

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[1] Peter Salus suggested that these "uninterpretable" statements might be cases in which but was used to mean although. This interpretation would not cover all of our subjects' uninterpretable but-statements, but does cover some, and is very interesting since although is also an adversative term, having only a slightly different meaning than but.

which the situation described in the preceding clause did not hold; (3) denied an inference that might be drawn on the basis of the preceding statement; (4) explicitly contradicted a prior statement; and (5) introduced a temporal repair.

The cognitive prerequisites that could be assumed to underlie and motivate each of these types of but-statements were also discussed. Statements contained in categories 1 and 2 indicate knowledge of optional pathways in the instantiation of an event. Statements contained in category three indicate at least an emerging ability to recognize the implications of one's own statements, and possibly to take the listener's perspective and make inferences about her inferences. Statements in categories 4 and 5 indicate knowledge of and adjustment to discourse conventions. I would certainly not claim that the preschoolers were conscious that they were expressing these different types of contrasts, but this hardly seems to be a central issue since adult speakers are also ordinarily unaware of the complex cognitive structures that govern their discourse.

The subjects' productions were divided into categories and discussed on the basis of whether the contrast signalled by but was directed toward the "text" of the statement, or toward the discourse process per se. From another perspective, however, all occurrences of but can be considered to be comments on the discourse process, since the word serves as a signal to the listener that the next statement may be somewhat unexpected. Braine's (1978) claim that the pragmatic function of but is to countermand listener expectancies would be in accord with a functional definition of but which conceived of this word as a sort of "stage direction" telling the listener to "expect the unexpected."

Very little is known either about very young children's understanding of discourse conventions or about their ability to adjust their speech in

accord with such conventions. This preliminary consideration of the young child's use of but indicates a somewhat surprising level of sophistication in both domains, as well as providing information about the types of contrasts that are salient to preschoolers. Such information about the structure of their world knowledge and about their sensitivity to the implications of their own statements and to discourse conventions is extremely difficult to obtain through more direct measures, and while these preliminary data do not provide definitive answers concerning these abilities, the evidence that the abilities do exist can provide the basis and motivation for future investigations.

References

Braine, M. D. S. On the relation between the natural logic of reasoning and standard logic. Psychological Review, 1978, 85, 1-21.

Kail, M. Étude génétique des présupposés de certains morphèmes grammaticaux Un exemple: MAIS. In Approches du langage, Publications de la Sorbonne, Série Etudes, tome 16, 1980, Paris, 53-62.

Kail, M. and Weissenborn, J. A developmental cross-linguistic study of the processing of lexical presuppositions: French 'mais' and German 'aber' vs. 'sondern.' Paper presented at the Fifth Annual Boston University Conference on Language Development, Boston, Mass., October, 1980.

Table 1

1. The pen is new, but it writes poorly.
2. The pen is new, but it writes well.
3. The pen is red, but it writes well.

Table 2*

Percentage of acceptance as a function of sentence type and age

	Sentences such as:		
$\bar{X}$ age	The pen is new, but it writes poorly.	The pen is new, but it writes well.	The pen is red, but it writes well.
6;8	20%	91.6%	61.6%
7;11	63.3%	61.6%	35%
8;6	75%	39.3%	5.3%
9;5	95.4%	18.1%	lo.5%

* Adapted from M. Kail, Etude Genetique des presupposes de certains morphemes grammaticaux Un exemple: Mais Approches du langage, 1980.

Table 3

Classification system for but-statements

Section 1. But used to introduce information that contrasts with implicit, shared knowledge:

1. You walk fast, but you can't put your coats on 'cause you need to hurry. S#19, 4;2
2. I go down the stairs but I don't talk. But I don't tie my shoes. S# 35, 4;11
3. Go outside quietly, but fast... S# 36, 5;0

Section 2. But used with if, when, and sometimes:

1. I never cooked them, but I'll try cooking them if my mommy buys it. S#20, 4;3
2. I have to go downstairs because my gramma's sleeping upstairs. ...I do and my mommy and daddy. But sometimes they're already down there. S# 35;-4;11.

Table 3 continued

Section 2, continued...

3. ... not too rushing, but when there's a real fire, you have to rush out. S#39, 5;4

Section 3: But used to introduce a statement that modifies a possible implication of the preceeding statement:

1. Some friends come over, but not too many. S# 20, 4;3
2. I putted on my green pants and one of my socks is blue, one of my socks is brown, but I couldn't find the other one. S# 15, 4;0
3. Well, first I didn't know how to, but NOW when I get dressed, I can put on my pants. But I once tried to put on my shoes, and I can't tie anything. S#19, 4;2

Section 4: But used to signal explicit self-contradiction:

1. (You told me a lot of important things about a birthday. Anything else?) Uh-uh. But you can bring lots of, you can eat and have lots of candy. S# 38, 5;4
2. (What do you do at a birthday party?) Nothing, but 'cept blow out the candles. S#17, 4;1
3. (Anything else that happens when you make cookies?) No, or not that I can think of. But you can do something. Drink milk with it. S# 39, 5;4

Section 5: Temporal repairs:

1. (How do you help your mommy?) First she gots the things out she needs. (First she gets out the things she needs?) Yeah, she gots something out to bake muffins with, but first she has to buy some things for muffins. S#1, 2;11
2. ...blow out the candles. I eat cake, but before, of course, I got to take them all out. S# 17, 4;1
3. You make the dough, eat them, but only when they're baked. S#38, 5;4

Section 6: Uninterpretable but-statements:

1. You put a lot of other stuff'--- flour, and I can't remember all about it, but a strawberry cookie. S#16, 4;0
2. ...and then I get up real real early, but sometimes my mommy and daddy are still sleeping. S# 34, 4;10
3. I think about fancy food, but that's all you said the other day. S# 20, 4;3